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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,218	06/09/2005	Andrei Mijritskii	NL 021422	9411

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EXAMINER	
SHEN, KEZHEN	
ART UNIT	PAPER NUMBER
2627	
MAIL DATE	DELIVERY MODE
08/05/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,218	MIJRITSKII ET AL.	
	Examiner	Art Unit	
	Kezhen Shen	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

A Request for Continued Examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/27/2009 has been entered.

Applicant's arguments with respect to claims 1,7 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. US 6,381,208 B1 in view of Gurer et al. US 6,177,133 B1.

Regarding claim 1, Abe et al. teach an optical record carrier for use in an optical scanning device (Fig. 1), the optical record carrier comprising an entrance face (6 of Fig. 1, Col 3 Lines 56-67), an information layer (3 and 5 of Fig. 1, Col 3 Lines 56-67) and at least one transparent layer (2 and 4 of Fig. 1, Col 3 Lines 56-67), located between the entrance face and the information layer (Fig. 1), through which data is to

be read from the information layer (Col 5 Lines 29-35), wherein the information layer includes a relief structure holding data in read-only form (11 of Fig. 3, Col 4 Lines 7-34 the embossed areas is considered read-only), characterized in that the data held in the relief structure includes a thickness variation profile comprising thickness variation data indicative of a variation in the thickness of the optical record carrier between the entrance face and the information layer (Col 4 Lines 35-63), due to a variation in the thickness of the at least one transparent layer (Col 3 Lines 63-67). Abe et al. fail to teach said thickness variation profile being determined based on a given lacquer formulation of said transparent layer and a rotational speed in creation of said transparent layer.

However, Gurer et al. does. Gurer et al. teach the method of calculating thickness of a spin coat given rotational speed and lacquer formulation (Col 5 Lines 18-67). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the optical record carrier as taught by Abe et al. with the teachings of the method of defining critical dimensions to calculate thickness during spin coating process as taught by Gurer et al. as a whole to define the thickness variation profile based on lacquer formulation and rotational speed in the process of creating the transparent layer for the benefit of forming a layer with a target thickness (Gurer et al. Col 5 Lines 50-67).

Regarding claim 2, Abe et al. teach an optical record carrier according to claim 1, wherein said data held in the relief structure includes data indicating a thickness profile in terms of a set of thickness data, each item in the set being indicative of a thickness

deviation at a different one of a plurality of locations across the entrance face (Col 3 Lines 63-67 Col 4 Lines 35-53).

Regarding claim 3, Abe et al. teach an optical record carrier according to claim 1, wherein said data held in the relief structure includes data indicating a thickness profile comprising a set of thickness function parameters which, when combined using a predetermined algorithm, provide a function indicative of a thickness profile across the entrance face (Col 4 Line 47 – Col 5 Line 4 and Col 7 Lines 24-39 and Lines 40-48 the thickness profile is calculated then saved to ROM where the aberration adjusting actuator can read the data and adjust the lens).

Regarding claim 4, Abe et al. teach an optical record carrier according to claim 1, wherein said relief structure comprises a pit/land structure holding the thickness variation data (Col 4 Lines 21-34).

Regarding claim 6, Abe et al. teach an optical record carrier according to claim 1, wherein the record carrier is in the form of a disc, and the thickness variation data indicates a radial thickness profile (Fig. 3, Col 4 Lines 7-34).

Regarding claim 7 Abe et al. teach a method of scanning an optical record carrier in an optical scanning device having an optical system capable of spherical aberration compensation (Fig. 5, Col 5 Lines 53-61), the optical record carrier comprising an entrance face (6 of Fig. 1, Col 3 Lines 56-67), an information layer (3 and 5 of Fig. 1, Col 3 Lines 56-67) and at least one transparent layer (2 and 4 of Fig. 1, Col 3 Lines 56-67), located between the entrance face and the information layer (Fig. 1), through which data is to be read from the information layer (Col 5 Lines 29-35), wherein the

information layer includes a thickness variation profile comprising thickness variation data indicative of a variation in the thickness of the optical record carrier between the entrance face and the information layer (Col 4 Lines 35-63), due to a variation in the thickness of the at least one transparent layer (Col 3 Lines 63-67) and comprises a relief structure holding data in read-only form (11 of Fig. 3, Col 4 Lines 7-34 the embossed areas is considered read-only), the method including the optical scanning device reading the thickness variation data and adjusting the optical system when scanning across the entrance face to perform spherical aberration compensation based on the thickness variation data (Col 7 Lines 40-55 and Col 8 Lines 21-39), characterized in that the optical scanning device reads data held in the relief structure to obtain said thickness variation data (Col 7 Lines 15-24). Abe et al. fail to teach said thickness variation profile being determined based on a given lacquer formulation of said transparent layer and a rotational speed in creation of said transparent layer.

However, Gurer et al. does. Gurer et al. teach the method of calculating thickness of a spin coat given rotational speed and lacquer formulation (Col 5 Lines 18-67). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the optical record carrier as taught by Abe et al. with the teachings of the method of defining critical dimensions to calculate thickness during spin coating process as taught by Gurer et al. as a whole to define the thickness variation profile based on lacquer formulation and rotational speed in the process of creating the transparent layer for the benefit of forming a layer with a target thickness (Gurer et al. Col 5 Lines 50-67).

Regarding claim 8, Abe et al. teach a method according to claim 7, in which the step of adjusting the optical system when scanning across the entrance face includes: evaluating the thickness variation data in accordance with a predetermined algorithm so as to generate thickness indicators for at least one of a plurality of selected locations across the entrance face (Col 7 Lines 24-39) converting the or each thickness indicator into data indicative of a spherical aberration compensation value in accordance with a predetermined conversion function (Col 7 Lines 40-48) and operating the optical scanning system in accordance with the spherical aberration compensation value so as to compensate for spherical aberration at the or each selected location (Col 7 Line 65 – Col 8 Line 5).

Regarding claim 9, the limitations of the method of manufacturing have been analyzed and rejected with respect to the optical record carrier above in claims 1 and 7. Further Abe et al. discloses the manufacturing of such disc (Col. 4 Lines 7-54).

Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. US 6,381,208 B1 and Gurer et al. US 6,177,133 B1 in view of Tsukagoshi et al. US 2002/0018438 A1.

Regarding claim 5, Abe et al. fail to teach an optical record carrier, wherein said relief structure comprises a groove structure having a wobble pattern holding the thickness variation data.

However, Tsukagoshi et al. teaches the use of a groove structure to hold data ([0021]). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the optical record carrier as taught by Abe et al. and the

teachings of the including data in a groove structure as taught by Tsukagoshi et al. to include thickness variation data in the wobble pattern for the benefit of more data density.

Regarding claim 10, Abe et al. fail to teach a method, wherein the method comprises forming the transparent layer by spin coating.

However, Tsukagoshi et al. teaches the creation of the transparent layers by spin coating ([0025]). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of the method of manufacturing the optical record carrier as taught by Abe et al. and the teachings of the method of manufacturing the transparent layer by spin coating as taught by Tsukagoshi et al. as a whole to spin coat the transparent layer for the benefit of creating a precise thickness of the transparent layer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kezhen Shen whose telephone number is (571) 270-1815. The examiner can normally be reached on Monday-Friday 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kezhen Shen/
Examiner, Art Unit 2627

/Joseph H. Feild/
Supervisory Patent Examiner, Art Unit 2627